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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/994,257	11/26/2001	Martin Andrew Schlosser	35015/002	8623
32827	7590	07/26/2004	EXAMINER	
DUFT SETTER OLLILA & BORNSSEN LLC			KENNY, STEPHEN	
2060 BROADWAY			ART UNIT	
SUITE 300			PAPER NUMBER	
BOULDER, CO 80302			3726	

DATE MAILED: 07/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/994,257	SCHLOSSER ET AL	
	Examiner	Art Unit	
	Stephen J Kenny	3726	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-10,12-19,23-27 and 30-51 is/are pending in the application.
- 4a) Of the above claim(s) 34-49 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,7-10,12-19,23-24, 26--2, 30-33 and 30-51 is/are rejected.
- 7) ☒ Claim(s) 3-6, 25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>6/1/04</u> . | 6) <input type="checkbox"/> Other: _____ |

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Response to Amendment

The declaration, and only the declaration (the arguments presented by applicant were not persuasive), under 37 CFR 1.132 filed 5/28/04 is sufficient to overcome the rejection of claims 1,7,8,12-19,23,24,26,27,30-33,50 and 51 based upon the Lanham reference relied upon in the U.S.C. 103 rejection has a common Assignee.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: several of the reference numbers do not correspond to the written description (e.g. the 100 series is not illustrated). Corrected drawing sheets, or amendment to the specification to add the reference character(s) in the description, are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 16-18, 23, 26, 27, 30-33, 50-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sipin (US Patent No 4559833) in view of Cucci (US Patent No 5672832).

Regarding claims 1 & 50-51, Sipin discloses manufacturing a Coriolis flowmeter adapted to extend a received process material comprising: coupling a flow tube (18) means to a base (10); affixing a driver (26) to said flow tube means; coupling a pick-off means to said flow tube means (34); and affixing inlet and outlet ends of said flow tube means to at least one process connection (76, 78) (see Figures 1, 2, 9).

Sipin does not explicitly disclose that the flow tube means is made entirely of PTFE or PFA material.

Cucci discloses a flow tube means (26) & process connection (16, 18 in Figure 3) made entirely of PTFE material (column 5, lines 51-54). The PTFE material used by Cucci is advantageous in that it is chemically-inert, & non-contaminating (column 5, line 53).

Furthermore, the Sipin flowmeter is routinely employed in the food and chemical process industries (column 1, lines 24-26) wherein it is inherent that the homogeneity of the material flow is critical to performance results. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to fabricate the flow tube & process connection of Sipin out of PTFE material as taught by Cucci in order to afford the advantages of pure, homogenous flow as discussed above.

Regarding claims 16-18, 23, 26, 27, 30, 31 Sipin discloses coupling the process connections (76, 78) to the base (74); by forming a receiving hole in said base, and securing said

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process connection in said hole (Figure 9); by adhering said process connection into said hole; inserting a flow tube end into a process connection to form a seal; note the step of laser welding said tube to said process connection is merely design choice (Figure 9 & column 6, lines 1-15); and employing optical sensors (which inherently require an opaque medium, column 5, lines 5-15).

Regarding claims 32 & 33, the Examiner takes Official Notice that the use of a temperature sensor on Coriolis flow meters is well established within the art. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to form a flow meter as disclosed by Sipin/Cucci and attach a temperature sensor to provide additional data regarding mass flow rates, density, and volume of the flow.

Claims 7, & 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sipin/Cucci, as modified above, and further in view of Drahm et al. (US Patent Application Publication 2001/0035055 A1).

Sipin/Cucci, as modified above, disclose the instant invention except for bending of the flow tube is straightened (or bent) in a fixture while undergoing a heating process.

Drahm discloses bending of the flow tubes (paragraph 0096) in order to form a desired geometry. This bending operation is advantageous in that it increases the flexibility of the manufacturing process by allowing a given flow tube to be bent (or straightened) for use in various Coriolis flowmeter configurations. Furthermore, the examiner takes official notice that the application of heat to the flow tube to facilitate bending is a concept old and well known. Heating (or annealing) of a component that is to be machined provides more desirable material

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characteristics (for example, it makes metal components more malleable) as well as reducing any residual stresses that may occur to the deformation process. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to form a Coriolis flowmeter as disclosed by Sipin/Cucci, by bending the flow tubes as taught by Drahm & the examiner's official notice in order to realize the advantages discussed above.

Claims 9-10, 12-15, 19, 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sipin/Cucci as modified above, and further in view of Hopkinson (US Patent No 5261284).

Sipin/Cucci, as modified above, disclose the claimed invention except for coupling the flow tube to the base using adhesives. Hopkinson discloses using adhesives to attach the flow tube to the base of a flowmeter (column 2, lines 29-34), and clearly states it is advantageous to do so in order to improve the thermal characteristics. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to form a flowmeter as disclosed by Sipin/Cucci while coupling the flow tube to the base using adhesives as taught by Hopkinson in order to realize this advantage. In further regards to claims 10 & 13-15, 19, 24 the use of cyanoacrylate adhesive, is merely a design choice since applicant has not stated that such an adhesive solves any problem or is for any particular purpose, and the adhesive of Hopkinson appears to be able to perform equally well; additionally attaching the pick-off means & process connections via adhesive would be an obvious and logical step given Hopkinson's disclosure.

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Allowable Subject Matter

Claims 3-6, & 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record on the attached PTO-892, and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen J Kenny whose telephone number is 703-306-0359. The examiner can normally be reached on mon - fri 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 703-308-1789. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**JOHN G. HONG
PRIMARY EXAMINER**

sk SK
7/21/04